

Comments

The enclosed is responsive to the Examiner's Office Action mailed September 20, 2005. At the time the Examiner mailed the Office Action claims 5-11 and 23-52 were pending. By way of the present response the Applicant has: 1) amended claims 5, 23, 29, 38, and 44; 2) added no new claims; and 3) has canceled no claims. As such claims 5 - 11 and 23 - 52 remain pending. The Applicants respectfully request reconsideration of the present application and the allowance of all claims.

INFORMATION DISCLOSE STATEMENT

The item Gielen, G., "An Analogue Module Generator for Mixed Analogue/Digital ASIC Design", in form 1449, was not considered by Examiner because a legible copy of the item was not provided. A legible copy of the item is being submitted with the present response.

35 U.S.C. §101 REJECTIONS

Claims 5-9 and 23-52 were rejected under 35 U.S.C. §101 as failing to be directed to statutory subject matter.

In reference to claims 5, 23, 29, 38, and 44, the claims include the feature of reading expressions from a source file and then creating a set of expressions in a compact numeric format. Therefore, Applicants respectfully submit that the useful, concrete, and tangible aspect of reading from a source file and creating a set of expressions should be sufficient to overcome Examiner's objections raised under 35 USC §101.

Furthermore, since claims 6-9, 24-28, 30-37, 39-43, and 45-52 depend from claims 5, 23, 29, 38, or 44 and include additional features, all claims should overcome Examiner's rejections raised under 35 USC §101. Thus, Applicants respectfully request that the 35 USC §101 rejections be removed.

35 U.S.C. §103 REJECTIONS

Claims 5-11 and 23-52 are rejected under 35 USC §103(a) as being unpatentable over Shao-Po et al., "A Parser/Solver for Semidefinite Programs with Matrix Structure", Technical Report, Information System Laboratory, Stanford University, November 1995 (hereinafter "Shao-Po"), in view of Hershenson et al., US Patent No. 6,311,145 (hereinafter "Hershenson"), and further in view of Dennis Bricker, "Signomial Geometric Programming", University of Iowa, April 1999 (hereinafter "Bricker").

In reference to claims 5, 23, 29, 38, and 44, Applicants respectfully submit that Shao-Po in view of Hershenson and further in view of Bricker does not teach or suggest all of the features of the claims. Claim 5 of the present invention recites:

A computer-implemented method of parsing a mathematical optimization problem comprising:

reading from a source file a plurality of algebraic expressions that represent a mathematical optimization problem, each algebraic expression in said plurality having one or more mathematical terms;

creating a set of signomial expressions by converting each of said mathematical terms to a signomial, at least one of said signomial expressions having a negative coefficient; and
converting said set of signomial expressions to a compact numeric format to be accepted by a computer-aided geometric program solver. **(emphasis added)**

Shao-Po, Hershenson, and Bricker do not describe or suggest the features of the independent claims of reading from a source file algebraic expressions having one or more mathematical terms, converting the mathematical terms to a signomial, and converting the signomial expressions to a compact numeric format.

Shao-Po, as relied upon by Examiner, describes the solver using input from Matlab's interface instead of reading from a source file. Therefore, Shao-Po in view of Hershenson and further in view of Brinker does not describe or suggest reading from a source file algebraic expressions having one or more mathematical terms, converting the mathematical terms to a signomial, and converting the signomial expressions to a compact numeric format. Therefore, Applicants respectfully submit that claims 5, 23, 29, 38, and 44 are in condition for allowance.

Notwithstanding the above argument, Applicants respectfully submit that mathematical terms being converted to signomials is not obvious, as stated by the present action (page 5, lines 13-15). Because of the need in the industry of the present invention and lack of a solution, the present invention is not obvious to one having ordinary skill in the art.

Shao-Po's description of the solver only shows equations where one side of an equality or inequality is zero. As disclosed in the present application, in a signomial program, each side of the equality or inequality can be a signomial. See page 8, lines 8-9. Hershenson is like Shao-Po in that the equations have one side of the equality or inequality being zero. In addition, Bricker does not involve parsing. Bricker shows the results of a solver program and does not describe implementing a parser to convert mathematical terms to signomials.

Therefore, Shao-Po in view of Hershenson and further in view of Bricker does not describe or suggest, and it is not known or obvious to one having ordinary skill in the art, to create a set of signomial expressions by converting mathematical terms to a signomial. Thus, Applicants respectfully submit that claims 5, 23, 29, 38, and 44 are in condition for allowance.

The language added to claims 5, 23, 29, 38, and 44 is fully supported in the original specification on page 11, lines 3-4 and in Figure 1. Therefore, Applicants respectfully submit that claims 5, 23, 29, 38, and 44 are in condition for allowance.

Since claims 6-11 and 24-28, 30-37, 39-43, and 45-52 depend from independent claims 5, 23, 29, 38, or 44 and include additional features, Applicant respectfully submits that all claims are in condition for allowance.

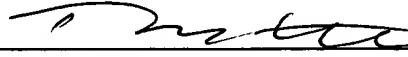
Conclusion

Applicant respectfully submits that all rejections have been overcome and that all pending claims are in condition for allowance.

If there are any additional charges, please charge Deposit Account No. 02-2666. If a telephone interview would in any way expedite the prosecution of this application, the Examiner is invited to contact Robert B. O'Rourke at (408)720-8300.

Respectfully Submitted,
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